Amendments to the Specification:

Please replace the paragraph beginning at page 10, line 14 with the following amended paragraph.

Fig. 17A-17B shows the generation of ΔAd.AAV genomes ~~geneomes~~ by recombination between inverted homology regions. A) Recombination between two inverted repeats (IRs) present in separate Ad.AAV vectors. The upper first-generation Ad.AAV vector (~34kb) contains two 1.2kb IRs flanking Gene X. An AAV-ITR ("AAV.ITR") is located between the Ad packaging signal (Ψ) and the left IR. The lower Ad.AAV vector, shown in the opposite orientation, contains the same IRs flanking a transgene cassette. An AAV-ITR is located between the left IR and the Ad packaging signal. During Ad replication, recombination between an IR on each vector (indicated by an X) mediates the formation of ΔAd.AAV genomes (lower portion of panel A) with the transgene flanked by IRs, AAV-ITRs, Ad packaging signals, and Ad ITRs. These genomes are efficiently packaged into Ad capsids. The other recombination product (not shown) is a defective Ad.AAV vector lacking packaging signals. Recombination between IR's shown on the left side generates at the left f ~~Recombination between two inverted repeats (IR) present in one Ad.AAV vector. The first-generation Ad.AAV vector (~34kb) contains two 1.2kb inverted homology elements flanking the transgene cassette. One AAV-ITR is inserted between the Ad packaging signal (Ψ) and the left IR. During Ad replication, recombination between the Irs mediates the formation of the ΔAd.AAV genomes with the transgene flanked by Irs, AAVITRs, Ad packaging signals, and Ad ITRs. These genomes are efficiently packaged into Ad capsids.~~ B) Recombination between homology regions of Gene X present in separate Ad.AAV vectors. The upper Ad.AAV vector contains a promoter (P) operably linked to the 5' portion of Gene X. An AAV-ITR is inserted between the Ad packaging signal (Ψ) and the promoter. The lower Ad.AAV vector, shown in the opposite orientation, contains the 3' portion of Gene X linked to a poly-adenylation region (PA). An AAV-ITR is inserted between the Ad packaging signal (Ψ) and the polyadenylation region. The 5' portion of Gene X in the upper vector has a region of overlapping homology with the 3' portion of Gene X in the lower vector.

Recombination between the overlapping homology regions (indicated by an X) mediates the formation of ΔAd.AAV genomes with the assembled GeneX flanked by AAV-ITRs, Ad packaging signals, and Ad ITRs.

Please replace the paragraph beginning at page 86, line 10 with the following amended paragraph:

Generation of chimeric adenoviral vectors (AD.AAV^{fx}) with heterologous fiber molecules: Adenoviruses with chimeric Ad5-Ad3 fiber are viable and can be produced at high titers (Krasnykh, V., et al., 1996, *J. of Virology,* 70, 6839-6846; Stevenson, S. C. et al., 1997, *J. Virology*, 71:4782-90). In order to test whether the fiber substitution described herein affects production or stability of adenoviruses, two E1-deleted first-generation, adenoviral vectors are produced with the AAV-βgal ~~AAV-□gal~~ cassette in 293 cells using standard protocols. The vector is generated by recombination of pAd.AAV-BG (prepared as in Fig. 17) with pCD1 (containing the endogenous Ad5 fiber) (Fig. 9); the other vector (with heterologous fiber) is the recombination product of pAd.AAV βgal and pAd5fiberX (pAd5^{fx}) (Fig. 9). Virus from single plaques is amplified on 293 cells. The production yield per 293 cell can be determined by plaque-titering of 293 cell lysates ~~Lysates~~. It is anticipated that the fiber modification will not critically effect the stability of chimeric vectors. Finally, bone marrow cells can be infected with the retargeted vectors. Two days after infection, live-cell cytometry is performed for β-gal expression using as substrate Fluourescein di-β-D-Galactopyranoside ~~Fluourescein di-□-D-Galactopyranoside~~ (FDG) (Cantwell, M.J. et al., 1996 *Blood* 88, 4676-4683; Neering, S. et al., 1996, *Blood*, 88:1147-55; Fiering, S.N. et al., 1991, *Cytometry*, 12:291; Mohler, W. et al., 1996, *PNAS*, 93:57) and the infected cells are characterized for morphology and surface markers. Before and during infection, bone marrow cells can be cultured in IMDM/FCS supplemented with thrombopoietin (Tpo), which supports the survival of HSC (Matsunaga, T. et al., 1996, *Blood*, 92:452-61; Papayannopoulou, T. et al., 1996, *Experimental Hematology*, 24:660-69). Alternatively, retargeted vectors can be generated with the AAV-GFP (green fluorescence protein) cassette and perform FACS analysis on transduced cells based on GFP and surface marker expression.